25 APR 95 15:46:19 U.S. Patent & Trademark Office P0008
(FILE 'USPAT' ENTERED AT 15:40:18 ON 25 APR 95)
SET PAGELENGTH 62
SET LINELENGTH 78

L1	19957	S DECOUPL? OR DE-COUP?
L2	225	S L1 AND MISSILE?
L3	41	S L2 AND SEEKER
L4	0	S ANGLE (W) OF (W) SQUINT
L5	215	S SQUINT
L6	449684	S ANGLE
L7	172	S L5 AND L6
L8	34	S L7 AND MISSILE?

=>

INPUT:

1. This application contains security classification markings or a request that it be held in a security status.

Within the time period set, applicant is required to either:

1) take the necessary steps to have a security order imposed on the application, or

2) if the national security no longer requires protection of the information in the application, provide instructions to remove the classification markings (or request for security status).

A complete response under option 1), above, would include either:

a) for a U.S. Government owned or prosecuted case, submission of a secrecy order, or

b) for a non-U.S. Government owned or prosecuted case, submission of evidence that the necessary information has been provided to the appropriate defense agency or the Armed Forces Patent Advisory board so that a secrecy order may be imposed.

If no complete response to this letter is received within the time period indicated on the cover sheet, this application will be held abandoned.

2. Acknowledgment is made of applicant's claim for priority based on an application filed in Germany on September 15, 1993. It is noted, however, that applicant has not filed a certified copy of the German application as required by 35 U.S.C. 119.

3. Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The disclosure is objected to because of the following informalities: On page 2, line 17, "ponting" should be "pointing"; On page 2, lines 31, 33 and 34, and on page 3, line 4, "A.c." and "a.c." should be "A.C."; on page 4, line 28, "assembly," should be "assembly, and "; on page 5, line 11, "if" should be "in"; on page 6, line 29, "contol" should be "control"; on page 7, line 25, "thus if" should be "if"; on page 7, line 26, "also in this case the" should be "the"; on page 7, line 34, "cosely" should be "closely"; on page 9, line 19, "Structure" should be

"structure"; on page 10, line 37, "processing" should be "signal processing"; on page 16, line 21, the first suffix "zr" should be "xr"; on page 17, line 16, "onput" should be "input"; on page 18, line 10, "negatve" should be "negative"; on page 20, line 17, "pich" should be "pitch"; on page 22, line 19, "maller" should be "smaller"; in line 36 of claim 1, "appied" should be "applied"; in line 46 of claim 1, "assembly (16), should be "assembly (16), and "; and in line 27 of claim 3, "contol" should be "control". Appropriate correction is required.

5. The drawings are objected to because the label on box 76 in Figure 3 should indicate that the box 76 is a computer (see page 11, lines 23-29). Also the suffixes for the labels for outputs 136 and 138 in Figure 4 should be "ys" (see page 15, lines 30 and 31). It is also noted that in Figures 4, 5 and 6, boxes 104, 116, 153, 154, 156, 178 and 218 are not labeled in accordance with 37 CFR § 1.83 (a). Correction is required.

6. Claims 1 through 3 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 44 of claim 1, "the roll movement" has no antecedent basis, since "roll movement" has not previously claimed; in line 44 of claim 1, the phrase "of which" is vague and unclear; in lines 3 through 6 of claim 3, "the angular rate", "the pitch angle", and "the target deviation" have no antecedent bases, since none of these have been previously claimed; in line 9 of claim 3, "said phase discriminating logic means" has no antecedent basis, since phase discriminating logic means" has not been previously claimed; in line 13 of claim 3, "the maximum control rate" has no antecedent basis, since a "maximum control rate " has not been previously claimed; and in line 20 of claim 3, "the

relative angular rate" has no antecedent basis, since a "relative angular rate" has not been previously claimed.

7. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

8. Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Gauggel et al in view of Hartmann et al and Jones.

Gauggel et al discloses a target tracking device for target tracking missiles having a seeker assembly 28 pivotally mounted about a pitch axis 26 and a roll axis 18. Gauggel et al does not disclose the specific use of an inertial sensor means with pick-off means or the specific use of a seeker-missile decoupling system. Hartmann et al teaches the use of an inertial sensor means 10 and pick-off means 144, 148. Hartmann et al also discloses the use of a computer 60 which generates commands for the seeker assembly's actuators. Jones teaches the use of a seeker-missile decoupling system. It would have been obvious to one of ordinary skill in the seeker assembly art at the time the invention was made to employ the teachings of Hartmann et al and Jones on the device of Gauggel et al and include

inertial sensor means, pick-off means, a computer, and a seeker-missile decoupling system for the purpose of improved target tracking capabilities.

9. Claims 2 and 3 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patents to Gauggel, Yueh, Wagner et al, Lawrence, Kordulla, and Pinson, French patent 2668614, and German patent 4223531 are cited as of interest to show target tracking devices and seeker assemblies.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Theresa M. Wesson whose telephone number is (703) 308-1685. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0511.

TMW
Wesson/gj-17

5-1-95

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